

THE

agricultural education

MAGAZINE

UNIVERSITY OF MINNESOTA
RECEIVED
MAR
8
1947



Line of fat lambs exhibited and marketed at the St. Louis Fat Lamb Show by Keytesville, Missouri, F.F.A. members

MARCH, 1947
VOL. 19
NUMBER 9

The Agricultural Education Magazine

A monthly magazine for teachers of agriculture. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by Successful Farming at Des Moines, Iowa.

MANAGING EDITORS

G. F. Ekstrom, Columbia, Missouri.....Editor
W. F. Stewart, Ohio State University, Columbus 10, Ohio.....Consulting Editor
W. Howard Martin, University of Connecticut, Storrs.....Business Manager

SPECIAL EDITORS

S. S. Sutherland, University Farm, Davis, California.....Professional
B. C. Johnson, Purdue University, Lafayette, Indiana.....Methods
G. P. Deyo, Michigan State College, East Lansing, Michigan.....Supervision
Lano Barron, Dept. of Education, Austin 11, Texas.....Farming Programs
C. L. Angerer, State A. & M. College, Stillwater, Oklahoma.....Farm Mechanics
R. W. Cline, University of Arizona, Tucson, Arizona.....Farmer Classes
J. N. Welsh, University of Illinois, Urbana, Illinois.....Research
R. B. Dickerson, Pennsylvania State College, University Park, Pennsylvania.....F.F.A.
E. L. Bryant, Tennessee State College, Knoxville, Tennessee.....Book Reviews
A. W. Tennen, U. S. Office of Education, Washington, D. C.....Book Reviews
A. P. Davidson, Kansas State College, Manhattan, Kansas.....Book Reviews

SPECIAL REPRESENTATIVES

North Atlantic, Henry S. Brunner.....State College, Pennsylvania
Southern, D. J. Howard.....Richmond, Virginia
Central, H. M. Byram.....East Lansing, Michigan
Western, R. W. Cline.....Tucson, Arizona

EDITING-MANAGING BOARD

Henry S. Brunner, Pennsylvania; D. J. Howard, Virginia; H. M. Byram, Michigan; R. W. Cline, Arizona; W. Howard Martin, Connecticut; W. F. Stewart, Ohio; W. T. Spanton, Washington, D. C.; H. C. Fetteroff, Pennsylvania; Carrie Hammond, Kentucky; C. E. Grace, Association of Teachers of Agriculture, Missouri.

Subscription price, \$1 per year, payable at the office of the Meredith Publishing Company, Des Moines 3, Iowa. Foreign subscriptions, \$1.25. Single copies, 10 cents. In submitting subscriptions, designate by appropriate symbols new subscribers, renewals, and changes in address. Contributions should be sent to the Special Editors or to the Editor. No advertising is accepted.

Entered as second-class matter January 21, 1929, under Act of Congress, March 3, 1879, at the post office, Des Moines, Iowa.

CONTENTS

Editorials

The Value of Modern Marketing Days.....Ray Cuff.....163

Our Publisher.....Henry S. Brunner.....163

New Special Editors.....163

Evaluation of Livestock Shows and Marketing Days in California.....G. P. Couper.....164

Livestock Shows.....164

Marketing Days.....165

Tri-State Livestock-Marketing School.....L. J. Anderson.....166

Shows and Marketing Days Have a Place.....C. V. Roderick.....167

Livestock Shows in Texas.....R. Lano Barron.....168

Detroit Fat-Stock Show and Sale.....169

Veterans Train to Farm in Georgia.....J. Lamar Branch.....170

Meat Processing in the Earle, Arkansas School.....Benny Hodges.....171

How Can We Keep Veterans Interested?.....Vernon V. Luther.....172

Veterans Farm Training at Fallon, Nevada.....L. C. Schank.....173

Seymour, Wisconsin Has Active Young Farmers Association.....Charles Jenkins.....173

Farmers' New Horizons.....R. W. Gregory.....174

Periodicals As Teaching Implements.....L. B. Robinson.....175

The Importance of Certain College Courses As Pre-Employment Training for Prospective Teachers of Vocational Agriculture.....F. E. Armstrong.....176

Use of Dynamite in Constructing Drainage Ditches.....C. G. Floten.....178

Harry F. Ainsworth.....178

E. V. Bearer.....178

Editorial Comment

The Value of Modern Marketing Days

PRESENT-DAY marketing days or marketing schools are a far cry from the old shows and sales of yesterday in which one exhibitor got nearly all the money, one breeder got all the advertising, one buyer got all the publicity and no one learned much about the actual selling, buying, and processing in marketing livestock and of grades and yields. The worst feature of the entire setup was that the few owners of the winning animals selling at fictitious prices went away with the idea that their future shipments would sell at comparably out-of-line, high prices.

The entire subject of livestock production cannot be taught in a schoolroom, since the end of livestock production is the good sale of an animal to be converted into meat, leather, fiber and by-products. Boys soon learn in marketing schools that the good sale of an animal is as important as the breeding, feeding, and care. To teach the entire production picture, marketing days were inaugurated nearly 20 years ago, at public livestock markets. It has been my privilege to work with departments of agricultural education and extension divisions in marketing schools at several livestock markets, from Fargo, North Dakota, to Oklahoma City, Oklahoma.

Packer Buyers Cooperate

It is fortunate that the packer buyers who buy livestock on the market every day cooperate in marketing schools by grading the various consignments on the hoof and explaining their reasons. These men take time to instruct the boys as to just what kind of carcasses are in demand by the consuming public and that, as seasons and buying power change, the demand for type of carcasses and cuts varies. When there is a spread of say \$5 between the choice and good grades of slaughter steers at a marketing school, any intelligent, progressive exhibitor will try to learn what it takes in type, weight, and condition to make the higher priced steer and the higher priced grades. This is one of the most practical and forceful ways of teaching the lesson of quality production.

In many of our better marketing schools, time is set apart to analyze the question of why parasites play such an important role in lowering the quality of lambs, hogs, and cattle and decrease profits. At most marketing schools, one session is given over to the study of some of the newer methods of controlling internal and external parasites in our meat-producing animals. As a result of actual demonstrations on the control of parasites, at marketing days, many vocational agriculture groups in rural high schools are now systematically treating their lambs and sheep with phenothiazine as a drench and salt lick, their cattle with DDT for fly control, with Derris or Cube' for grub control, with DDT and BHC for louse and tick control, and with BHC for controlling lice and mites on poultry. Last season, one Oklahoma F.F.A. chapter treated over 10,000 cattle with Cube', by hand, for grub control. The boys who learn the newer practices help educate their fathers and neighbors.

Opportunity to Observe Carcasses

In two-day marketing schools it is possible, on the second day, for the processor to have the exhibitors' animals slaughtered and on the rail, so that they boys may see exactly how their own animals dress out. Here they get firsthand information on any old or fresh bruises, on their own animals, as the meat inspectors trim out and tank all bruised portions as inedible. They learn the lesson that livestock is easily bruised, that the safe handling of market-bound livestock pays the grower and that bruised carcasses eventually must sell for less. Until the boy sees his own calf, hog, or lamb on the rail, he may not be satisfied with the actual grading of his live animal. Until then, he will not understand exactly the reasons why his live animal has been graded lower.

At marketing days, we try to take boys into the feeder-cattle division of the yards to learn firsthand the type of feeder calf that will best utilize the grain and roughage produced on their

Our Publisher

DURING the annual conference of the Central Region at Des Moines in April, 1928, representatives of the Meredith Publishing Company of that city expressed a desire to give some sort of assistance to the cause of agricultural education. It occurred to certain members of the conference that the company might be willing to assist with a teachers' publication. The company's managers were approached, and before the close of the conference a proposal for publishing was submitted to a committee, headed by Z. M. Smith of Indiana.**

Following the Des Moines conference, the committee submitted its proposal to the executive committee of the American Vocational Association. The committee then proceeded to sound out the state supervisors of agricultural education. When 1,500 subscriptions had been assured, the publishers expressed themselves as satisfied that the venture would be self-supporting and agreed to meet any losses that might be incurred, so that the professional sponsors would incur no risks. The project was endorsed by the Agricultural Section of the American Vocational Association in December, 1928, and the first issue was published in January, 1929.

The connection with the publisher has been most amiable. The facilities of the company and particularly of the Successful Farming staff have been placed at the disposal of our editorial staff. The charges made are only those for printing and mailing, which has made it possible to issue a magazine without advertising and without interruption these many years.—Henry S. Brunner, Chairman, Editing-Managing Board.

**Agricultural Education 1:2, January, 1929.

New Special Editors

TWO appointments to the staff of special editors have been made as a result of resignations submitted to the Editing-Managing Board during the annual meeting held at the recent A.V.A. convention.

Dr. B. C. Lawson, Professor of Vocational Education and Chairman of Agricultural Education at Purdue University, is succeeding Dr. Henry Brunner of Pennsylvania State College as one of the editors for the professional section.

Doctor Lawson received the B. S. and M. S. degrees from the University of Illinois and the Ph. D. degree from Cornell. Formerly he served as a teacher of vocational agriculture in Illinois and as a staff member at the University of Illinois, Cornell University, and the University of Connecticut. Doctor Lawson and Professor S. S. Sutherland are planning for a series of special articles to be included in the professional section.



B. C. Lawson

Dr. R. B. Dickerson of Pennsylvania State College is succeeding Professor W. H. Martin as one of the cooperating editors for the Farmer Classes section. Professor Martin had served in a dual capacity since taking over the duties of business manager last July.

Doctor Dickerson was a student of vocational agriculture in the public schools of Sussex County, New Jersey. His B. S. and Ph. D. degrees are from Pennsylvania State College and his M. S. degree is from Rutgers University. Before joining the staff at Pennsylvania State College, Doctor Dickerson taught vocational agriculture in Pennsylvania and New Jersey. He is a specialist in the instruction of young and adult farmers and will serve with J. N. Weiss of the University of Illinois as a special editor for the Farmer Classes section.



R. B. Dickerson

Livestock Shows

Evaluation of Livestock Shows and Marketing Days in California

G. P. COUPER, Subject Matter Specialist, San Luis Obispo, California

FOR a correct evaluation of the participation of Future Farmers of America in California livestock shows and marketing days, it is best to make a brief analysis of livestock production and meat consumption in the state as a basis of understanding of the situation and problems.

First, California must import more than half the meat it consumes. It is the most rapidly growing of all states in population, now about fourth in the nation and perhaps destined to be first within a relatively short time. But the probability of a marked increase in its livestock production is scant. Here are some of the reasons:

In pioneer days, the state produced more cattle and lambs than it consumed, virtually entirely on the range. Today, the tendency is toward more irrigated pasture and decreasing use of the range, but the greater the population, the less water there is available for irrigated pasture. And in a state in which generally rain does not fall between May 1 and the latter part of November, the increase in pasture is totally dependent on the irrigation supply.

Land Too Valuable for Crops

California has roughly 100 million acres of land. Of this total, only about 8 million are tillable, but for the most part this tillable land lies in the flat, rich valleys where intensive cultivation in luxury vegetable and fruit crops makes the land too valuable for the growing of hay, pastures, and grain for livestock. There are about 24 million acres of other agricultural land, most of which is good only for grazing and not for irrigation.

California grows a considerable amount of grain on dry land, but relatively little of this grain is fed to livestock by the grain grower. Instead, one man may own hundreds or thousands of acres of grain land, and he sells his product—principally barley—to the man who may have some livestock on a farm the land of which is too valuable to devote to grain. In short, there are virtually no men producing grain and feeding it to livestock on the same farm.

Normally more than 400,000 of California's early lambs—milk-fat—go directly to the eastern market along in May and June with no supplemental feeding. Then, the state buys back from Nevada, Utah, Idaho and other states, later lambs which are fed out on irrigated pasture, barley stubble, sugar-beet tops and similar feed for the year-around California market. The lamb and wool production in the state is steadily decreasing.

Most of California's beef cattle are marketed directly off the range. The average beef cattle ranch is one of several thousand acres. There are a few big feed-lots near sugar-beet refineries, where wet beet pulp is fed. Generally land is too valuable and feed prices too high for long feeding operations.

The swine situation is even more dependent upon the plentifullness and price of grain. Even the most California barrows are fattened on barley, the corn price and availability are controlling factors. When, during the war, hog prices were relatively low and corn high, California farmers simply went out of the swine business.

That is a general picture of California livestock production. It may cause some

Livestock Shows

AN ATTEMPT is made in this issue to present reports on differing types of livestock shows and marketing days held for students of vocational agriculture in various states. The contributions were solicited with the cooperation of C. L. Angerer, special editor for the Farming Programs section.

The types of such activities vary from competitive exhibits of purebred animals and fat livestock to marketing schools held at livestock markets. These variations can be attributed in part to differences in types of farming, but more important perhaps to the emphasis placed on the kinds of activities promoted.

There is no denying the fact that competitive shows appeal to the exhibitor and have a promotional value with the public. Also, such exhibits may be instrumental in the development of breeding animals. Conversely, there exists the danger of exploitation, and there is also the question as to whether this type of show contributes the maximum value toward the realization of objectives pertaining to the production and marketing of livestock and livestock products.

wonder as to where the Future Farmers of America in the state find an interest in participating in fairs and marketing days.

Reasons for Fairs and Marketing Days

1. California farms are too specialized. There is a real need for more diversification by the introduction of a few head of meat animals on many farms to clean up valuable by-products, keep ditch banks clean, provide a source of fertilizer, and for home butchering. Many F.F.A. projects are of this type.

2. Under normal circumstances there is an opportunity for many farmers to buy a few steers that have been on the range for a year or longer, and thru a short feeding period increase the carcass value materially. The demand in the state is for lighter, better-finished steers than the grass-fat 2-year-olds and older. Relatively few California farmers know how to put the right finish on cattle. Future Farmers learn thru projects.

3. There is a constant demand for good, purebred, range beef bulls, principally Herefords. While few Future Farmers ever get into the range cattle business except by inheritance—because it takes a minimum investment of \$75,000 to \$150,000—quite a number are developing small purebred herds to supply range bulls and some good females.

4. Because California is a meat-importing state with rapidly growing population, the demand for meat is always good. With a probable drop in grain prices, it will again be profitable to produce swine by feeding California barley and even importing Midwestern corn.

5. Small-farm flocks of sheep, together with the development of irrigated pas-



This Bakersfield Future Farmer is feeding out five steers. The Kern County fair encourages this practice in every way, with very good prizes, and classes for five steers owned by one exhibitor

Marketing Days

Marketing Days

THERE has been some tendency to avoid criticisms of conventional shows and still retain their identity. The adjustments involve changes in judging standards, the substitution of merit awards for individual placings, the weighting of carcass values, and a reorganization of classes to emphasize groups of animals.

In some areas of the country there has been a shift, in the case of market animals, from livestock shows to marketing schools. This innovation is predicated on the fact that most livestock reaches the consumer thru the public market and that the young producer should acquaint himself directly with the steps in this procedure. On the surface, activities of this type may appear drab but properly managed can be highly educational. Likewise the ability to produce an animal which grades "choice" may require a degree of skill comparable to placing an animal in the "blue ribbon" group.

Your editors do not anticipate that the articles presented herewith will settle issues as to the merits of different types of shows and marketing days. However, the activities upon which the contributions are based are presented for evaluation.

ture particularly in the area of the huge Central Valley project, seem destined largely to replace the huge bands of sheep which formerly roamed open ranges and public forests. Here again, the young man with a small stake can get a foothold. There is a steady demand, too, for good rams for the range flocks.

6. California has a big appetite for dairy products, particularly market milk. More F.F.A. boys who are now big-scale farmers with assets of \$75,000 or more arrived at this station thru developing dairy enterprises, than thru any other kind of agriculture which can be traced to F.F.A. projects. While hundreds are now outstanding fruit and vegetable producers, many of them had animal rather than horticultural projects in high school.

Basic Principles

With these more favorable factors, California Future Farmers have a few basic principles of participation in fairs. First, every one of the 72 county and district fairs in California has a separate division for Future Farmers of America. They are not just "juniors" or "vo-ags" but Future Farmers. This gives the teacher of agriculture and the state department of vocational agriculture full control and responsibility, and the F.F.A. boy pride in his organization and its identity.

With all fairs supported from the state's share of pari-mutuel wagering, the premiums are relatively high in most fairs. A number of California county fairs pay out to F.F.A. boys alone more in premiums than some state fairs in relatively rich Midwestern areas. At the Interstate

Junior show held just before the war, more than 2,500 head of steers, lambs, and barrows were shown, about 1,800 by Future Farmers. The Midwestern judges who placed the animals said it was the best meat-animal show they had ever seen anywhere.

There can be no real test of what will happen during the next year or so, until prices stabilize. Feeder calves sold at the Grand National Livestock show late in November brought as high as 35 cents, while meat prices are certainly due for a slash. No Future Farmer was encouraged to pay such feeder prices.

We were making considerable progress toward the establishment of marketing days before the war, but this was all dropped when hostilities started. Now, an organized effort will be made to re-establish marketing days as economic conditions permit. Meanwhile, a 1947 spring junior show in San Francisco, using the Danish system of judging for the first time in a major California show, will have a tendency to accomplish about the same objective as the marketing day.

Specialist Provided

California has one unique distinction in regard to its Future Farmer livestock program. The State Department of Education provides the services of J. I. Thompson, nationally known livestock expert, who visits most of the 175 departments of vocational agriculture each year and works with teachers and boys in the sound improvement of their livestock programs. Thompson also has a major part in the development of premium lists and rules for fairs, thus bringing the best actual field contact into these important deliberations.

During the war, virtually all California fairs were suspended. There was a noticeable drop in livestock-project quality, altho some of this was due to the imminence of the draft for the older boys. It is hoped that during the next few years California fairs and marketing days can again become a sound incentive for Future Farmers to produce the kind of livestock the state needs to feed its teeming population.

Value of Marketing Days

(Continued from page 163)

own farms, as some will want to rough their calves over winter and others will want to put them on full feed.

A well-planned noon luncheon program offers an opportunity for young livestock exhibitors and market agencies to become better acquainted and for a discussion of pertinent marketing problems by those who are well versed in these problems. A marketing school provided an opportunity for future livestock growers to become familiar with the functions of each market agency—commission man, trader, stockyards company, packer buyer, order buyer, transportation agencies and the inspection services of the U. S. Department of Agriculture on the yards. These agencies are the people on whom the young livestock growers must depend for honest prices for their livestock thru which most of their farm products will be marketed.

Marketing days will continue to be of direct service as an educational agency in direct proportion to the vision of the departments of agricultural education and the livestock market operators.—Ray L. Cuff, Kansas City, Missouri.



A Future Farmer class of lambs at the Great Western Livestock Show the first week in December. Most of these lambs were late ones dropped in California and bought in June or July

Tri-State Livestock-Marketing School

L. J. ANDERSON, Assistant Secretary, Union Stock Yards Company,
St Paul, Minnesota

MOVING the high-school classrooms right into the pens and alleys of the large terminal public livestock markets for a day has become a real thing in the study of livestock marketing for high-school students of vocational agriculture in Minnesota, Wisconsin, and Iowa.

By this method of teaching, the students are brought into intimate touch with the marketing trade and with the operation of livestock-marketing machinery. And by following the sale of their livestock thru all of the marketing processes, students have the opportunity of seeing just how livestock is sold on a public market.

At the Ninth Annual Northwest Livestock-Marketing School for Future Farmers and students of vocational agriculture held on Friday, December 6, 1946,

and which is an annual event at the Union Stockyards at South St. Paul, Minnesota, some 500 students with their instructors from 53 high schools were in attendance and marketed 808 head of livestock.

Like preceding schools, the Ninth Annual School was designed to give systematic instruction in the various phases of and procedures in livestock marketing. No departure is made from the established marketing practices by marketing agencies in the selling of consignments received from the students. They are handled and sold by the respective agencies in the same manner as all other livestock arriving for sale at the market.

The marketing procedure begins with the selection by the student of the market agency to which the livestock is to be con-

signed and obtaining approval of the parent of the selection and the proposed sale.

The branding of the livestock just before loading to preserve identity of ownership becomes the next step and the observations by the student extend to the actual witnessing of the sale in the commission firm's pens.

Students Consign Livestock

Each student who attends the Livestock-Marketing School consigns and markets his livestock in the same manner as all other consignments are handled and observes the grading and selling which helps him to become acquainted with marketing requirements and to develop a better understanding of livestock-marketing methods.

An intensive, instructional program is followed in the stockyards which includes a demonstration of the various market classes and grades of livestock and information as to the going market price for each class and grade shown.

While in the stockyards, the student follows the livestock from the sales pens to the scales and observes the weighing operation in which the owner's consignment is charged to the buyer. The various steps in marketing are explained to the student, including the importance of the time of arrival of livestock at market from the standpoint of resting and feeding of the stock before sale.

The functions of various agencies such as the service performed by veterinarians in the testing of cattle and immunization of stock pigs to meet various state requirements in the shipment of livestock to those states are explained.

Demonstrations as to the right and wrong way of branding or marking livestock consignments of mixed ownership for identification upon arrival at the market and maintaining the identity thru all of the sorting and sale processes have a prominent place in the program.

At other sessions during the day there are chart talks explaining the various methods of marketing livestock and a showing of films and a discussion of methods of reducing livestock losses in the handling and transportation of shipments to market.

In another important demonstration and discussion of the respective relationships of the various grades of livestock to the dressed-meat product and the broader aspects of livestock marketing in relationship to livestock production and consumer demand, students have the opportunity to visualize the types of livestock in greatest market demand and to learn why a greater demand exists for one class as against another.

Judge Market Classes

Climaxing the day's events is the judging contest in which all students as well as instructors participate in estimating grade, price, and weight of a cross section of various classes and grades of livestock.

Awards are given to the students in recognition of success in marketing livestock of good grade or better at the school, and how the student manifested himself in the judging contest, and the aptitude shown by the student in assimilating marketing information in his classroom work during the school year.

(Continued on page 177)



Emphasis at this year's marketing school, conducted at South St. Paul, centered on hogs, and opportunity was given to visualize the degrees of variations in carcass cuts. Professor P. A. Anderson, of the animal husbandry department at the University of Minnesota, is shown here as he presented this discussion and demonstration. Hogs located in nearby pens were used to illustrate the relationship between live and carcass grading of meat.



Group of boys receiving instruction in the grading of cattle for sale in the pens of one of the livestock selling agencies operating on the St. Paul market.

Shows and Marketing Days Have a Place

C. V. RODERICK, District Supervisor, Jefferson City, Missouri

IN ORDER to justify the time, the effort and the money spent in conducting livestock shows, sales, and marketing days, there should be some well-defined reasons and purposes for maintaining them. The three purposes that stand out most clearly are:

1. They should be educational.
2. They should inspire the boys to improve their livestock or production methods by seeing the type of job being done by other exhibitors.
3. They should promote interest in vocational agriculture and in the future of agriculture.

If our shows do not meet at least two of these standards, then their value is questionable.

For the past 20 years, organized shows and sales for students of vocational agriculture have been in operation in Missouri. Sometimes it may appear that the program has grown "just like Topsy," without any definite pattern or reason; but, after analyzing this growth, we find that there is a reason and purpose in the development of livestock shows and sales.

Types of Shows

The first shows held were strictly exhibits of purebred livestock at our county fairs, the state fair and the American Royal. Realizing that these did not meet the needs of all the boys in vocational agriculture classes and in F.F.A. chapters, shows and sales for market animals were set up. The first of these shows were fat-livestock shows in which the livestock were placed, and the animals then sold by auction to the highest bidders. This type of show was then followed by one in which the animals were placed, after which they were sold by auction, with the animals being followed thru the packing house and the resulting dressing percentage of carcasses determined. In this way the boys were able to see the quality of the product both on foot and on the hooks and could justify the price received from their livestock.

Sometime later our shows were a modification of this. The animals were graded on arrival at the market. These animals were then sold according to

grade by one of two methods. In one case, a committee was authorized to sell all animals according to their grade. In the other case, they were auctioned according to grade. In this type of show, the grades used were choice, good, medium, and common or cull. In the marketing process, a premium was paid for choice animals ranging from 50 cents to \$2 per hundredweight above the open market price. Good animals normally received the practical top for the day, while other grades received materially lower prices than the market top. In shows where animals were placed, a champion, reserve champion, and champion groups were selected. These always brought materially higher prices than the rest of the animals. When animals were graded, there were no champions and all animals sold only by grade.

Marketing Days

Out of these fat-stock shows has grown another method of selling project livestock, and that is thru what we call regular "marketing days." This procedure does not involve placing of animals. The animals are brought in early in the morning. They are then graded by a competent, disinterested grader, according to United States standards of grading. An award is made on every animal that grades choice. These animals are then released to the livestock commission firms to which they are consigned, who in turn, market the animals thru regular channels as they would handle regular consignments of livestock. During the marketing procedure the boys have an opportunity actually to see their animals sold. After this, they are given an opportunity to grade a selected group of different kinds of market animals actually being sold on the market. The exhibitors are then taken thru a packing house to complete the marketing cycle. The boy has an incentive for consigning his livestock to market on these special days since he is paid for the quality of livestock produced. It is educational in that the boy can follow his animals thru the regular marketing procedure by which they will be handled when he gets out of school and comes back with other livestock. A marketing program handled in this way need

not be over one day in length and still give the boy an opportunity to get home at a reasonable hour. We are not sure that this is the desired goal for shows, but we do know that his type of market procedure—marketing days—meets with the approval of nearly all instructors of vocational agriculture and their students and that it fulfills the purpose which shows should accomplish.

District Purebred Shows and Sales

Two years ago the Missouri legislature realized the value of encouraging boys to produce and exhibit good livestock by appropriating money to be used for district shows and sales. As a result of this legislation, district F.F.A. livestock shows have been organized in each of the four supervisory districts in Missouri. This has given vocational agriculture and F.F.A. students in these districts an opportunity to exhibit their project animals and to sell them, if desired, to farmers and other students who might be interested in getting a start with purebred livestock. Animals in most cases are judged and awards made according to the Danish system. (Animals are not placed, but are grouped into blue, red, and white groups according to their quality. In any given class there can be a large number, or even none, in the blue group, depending on the quality of animals shown. Animals not good enough to be placed in one of these three groups do not receive any award.) In this way, due recognition is given to the boys who do an outstanding job with their exhibits. These shows have fulfilled a real need in the state and have done a great deal to improve the quality of livestock thruout the state.

Conclusion

County fairs, state fairs, district fairs, and sectional fairs or shows in which purebred animals are exhibited have a definite place in the program of vocational agriculture. These shows are mainly inspirational and promotional in nature. Some might even say they are educational, but this value is probably secondary in nature.

The market-day type of show, in which market animals are sold on a graded basis by a committee or auction, meets all of the real purposes originally established for justifying shows.

The writer believes that the type of market day in which awards are made on choice animals and then the animals marketed by regular marketing channels is most educational in nature and is stimulating to the boys participating. It does promote vocational agriculture, but in a different light than that of showing a grand champion calf, hog, or lamb. Shows have a definite place in the program of vocational agriculture, but it should be remembered that each type has a definite purpose or purposes.

The annual potato show for Future Farmers in West Central Michigan was held at Greenville on October 30. The show is an educational affair and includes (a) demonstrations (b) exhibits pertaining to cultural or marketing practices, and potato grading, and (c) samples of market potatoes and certified seed grown by individual members or in group undertakings.



Champion carlot of fat hogs at the St. Louis Fat Hog Show. These hogs were fed and exhibited by F.F.A. members from Bloomfield, Missouri

Livestock Shows in Texas

R. LANO BARRON, State Supervisor, Austin, Texas

OUR opinion has changed regarding livestock shows. Until a few years ago we thought the average farm boy should not participate in them. Today, the majority of teachers of agriculture and staff members in Texas are looking more favorably on the feeding and fitting of livestock for shows. Surely, there is considerable good in anything that thrives like stock shows. Maybe, we are alone as a state in our thinking; maybe we are one among many. But whatever the picture, we are glad to pass on to others some of our experiences and thinking on the subject.

Unquestionably, livestock shows have increased in number and size. Our state shows are averaging more than 600 beef-calf entries alone, and the big majority of these are owned and exhibited by Future Farmers. Local project shows have sprung up in even the smallest rural communities where as many as 75 beef-calf entries have been noted.

In the sheep and goat country local shows have increased proportionately, and many departments have erected feeding barns to house as many as several hundred head of lambs.

The hog shows have kept pace with those of other types of livestock, and enormous increases in showing capons and turkeys have been made.

What's Increased the Popularity of Shows?

Offhand, one would think that the many incentives accruing during the past few years were born of the generosity of civic-minded citizens who were trying to stimulate and encourage production for the war effort. However, a closer look in our state reveals that a considerable number have been added since the boisterous emergence of the atomic bomb.

In the first place, the substantial sale price of all show animals in all the shows has attracted many exhibitors. Out of this added list it is to be expected that a high percent are relatively inexperienced in fitting and showing. Even many of the instructors are amateurs. However, they have not been disappointed so far because even "sifted" entries have sold for a good profit.

In the second place, there has been the incentive—always challenging—of taking home a small fortune by showing a winner. Originally this hope rested only in the possibility of showing a grand champion, but now that attraction extends well into the blue and red ribbon winners.

Another material incentive of late has been the "scramble calf" idea. Businessmen, farmers, and ranchers give top-quality feeder calves to the show. The show, in turn, permits twice as many boys to enter the arena with these calves, and when a boy catches a calf he becomes its owner.

He is expected to prepare the calf for show one year from then, at which time



R. L. Barron

he gets a good price for his calf, attractive prizes, and much other recognition. Of late, a \$2,000 scholarship has been added at one show for the boy who makes the best record with what he has to work. This is in addition to the giving away of 150 calves.

The Good Points

It is generally considered good for the boy so long as he makes money out of his feeding program and understands why and how. Generally it is considered true that boys with feeder projects wind up their vocational agriculture work with

"cash-in-hand" only, but this isn't necessarily true. In fact, when it is true, one will find that in all probability the teacher has not led the boy into a thorough understanding. Frequently, however, the profits from feeding go into breeding animals. This is good, because it means we are training boys—not calves. We are helping them to get established in farming quickly, and thru good experience.

Not all of the show-ring support has been for fat animals. Increasing interest is being shown in the exhibition of breeding animals by farm boys, as evidenced by the Hill Country Show at Kerrville, Texas. This is a seven-county show in a diversified ranching country. For this year, 1,050 entries have been made. This represents participation of about half the high-school boys in those counties, and about 90 percent of the entries are



This Future Farmer took home a very sizable amount in premiums from shows in one year. Others have been paid well during the past five years in striving for similar awards



This champion pen of hogs was fed and exhibited by the Future Farmer in the picture. This is one of dozens of major show championships won by members of his chapter during the past few years. As a result there are more registered hog breeders in his home county than in any other county in the state

made by Future Farmers. While an exact count of the breeding animals entered has not been made, two-thirds of the \$900 prizes go to breeding classes. This is in addition to \$850 in cash and scholarship awards for the exhibitors of the top animals of the different types of livestock and for showmanship. Most of these are usually won by exhibitors of breeding animals.

While there is considerable apprehension about the "bubble bursting," some of the staff members "hit the nail on the head" when they pointed out recently that those who were in the business would be better informed than those merely wanting to get started. Some recession is expected to occur, but it is expected to be less because of there now being so many shows in existence. This is based on the thinking that the exhibitors can be guided by their local shows. Considerable selling already takes place at the local shows, and still more at the district and regional shows. The closer to home sales are made, the less the exhibitor can afford to sell for.

Too, a number of bigger buyers are giving increased support to the sales at local and district shows, because of their recognition of the advantages of the favorable publicity they get. To bring added recognition to these smaller shows and sales, *The Future Farmer*, our state publication, carries a calendar of shows and sales. And of course the big buyers are on the mailing list.

Helps Vocational Agriculture Service, in General

It has been thoroughly demonstrated to the personnel in our service that vocational agriculture derives many benefits from the fine relations established thru our contacts with the civic-minded businessmen, ranchers, and farmers who help with shows. These are the men who are in a position to further the cause of our program, and yet we have not been able to get the story of our work over to them except thru the course of the livestock shows. These men are naturally busy and our puny efforts in publicity have been so overshadowed by other agencies that they were unaware of our existence.

Too, once these fellows get some money invested in our program, even tho it be in the calf donated to a student of vocational agriculture, they become conscious of the name of our service. There is the human interest that has been established in our work thru their connection with the boy. Then, last but not least, men who have money are those who are interested in the "stuff" and are "money conscious." They are interested in seeing what happens to their money that bought the boy a calf. They own a share in vocational agriculture. It becomes their program.

This point should not be brushed off lightly. Some may consider that this is a poor way to further our program; that we are making the farm boy "foot the bill," but they should keep in mind that this participation is based on the fact that the boy's own personal interests must be looked after first. If we can do this and at the same time pave the way for making vocational agriculture available to every farm boy, then we are killing two birds with one stone. We may need thus to conserve our ammunition in view of the obstacles that no doubt lie ahead.

Detroit Fat-Stock Show and Sale

Photos by Michigan State Board of Control for Vocational Education



Grading steers into market grades at Michigan Future Farmer Fat Stock Show and Sale, Detroit, Michigan. Here shown are a livestock commission man and Professor George Branaman, of Michigan State College, who are doing the grading. Premiums are based on market grades; there are no grand champions



An F.F.A. member at the Michigan Future Farmer Fat Stock Show and Sale has just described how he raised this group of choice market lambs. Professor George Brown, of Michigan State College, is adding further comments and suggestions



An F.F.A. member at the Michigan Future Farmer Fat Stock Show and Sale is telling the members from various schools how he raised this litter of choice market hogs. All livestock are later sold thru regular market channels

J. N. WEISS

Farmer Classes

R. B. DICKERSON

Veterans Train to Farm in Georgia

J. LAMAR BRANCH, Special Supervisor Veterans Farm Training, Tifton, Georgia

Certainly a veteran just starting in the business of farming represents an individual who needs guided learning in his chosen vocation. He not only needs, but is diligently seeking this training. To meet this need the Veterans Administration under the provisions of the GI Bill of Rights signed a contract with the Georgia Department of Education whereby the Vocational Education Division is offering farm-training courses thru the local agricultural departments of the state, with special veteran instructors. This program consequently becomes a definite part of the local school program. Regular teachers of agriculture and teachers of Veterans Farm Training work very cooperatively in putting over the program.

The Veterans Farm Training program in Georgia officially began February 25, 1946. We now have 122 classes in operation with a total enrollment of 2,196.

time and to insure absolute managerial responsibility, an advisory committee has been set up in each county to review all farm agreements and programs of applicants. This committee is usually composed of representatives from all agricultural agencies with three to five farmers included. This committee carefully examines each farm situation from the standpoint of representing a basis of a training program. Applicants passing have their agreements signed by the chairman of the advisory committee. They are then officially enrolled in the Veterans Farm Training program.

Results Must Be Justified

It is pointed out to the veteran from the beginning, that this program cannot be justified on the basis of subsistence (\$65 or \$90 per month), but can only be justified from the point of view of a

building practices, home improvements, and financial assistance. With the training received together with the subsistence paid, the veteran should become well established in farming. We think the effectiveness of this program can be measured 3, 4, 5 years from now by the results obtained on the farms of the trainees and by their ability to solve their own problems.

Well-qualified teachers are secured as instructors. Before going on the job, the prospective teacher is sent to the University of Georgia for a week's short course. Here under the direction of the teacher-training staff the teacher becomes thoroughly familiar with the problems confronting an instructor of veterans farm training.

After going on the job, the teacher continues to receive help. Two special supervisors in the state work with the veterans instructors individually. Each month or two the teachers are called together by districts and clinics in such subjects as farm machinery, livestock, farm crops, concrete work, painting,



Old house on farm operated by Charley Hendrix, veteran trainee at Metter, Georgia. In addition to operating a general farm during 1946, Charley found time to replace the house



New house constructed by Charley Hendrix with assistance by his father and brother. The trainee made his own concrete blocks and sawed the lumber from timber on the farm

Since the above tabulations were made, 28 teachers have been trained and will go on the job in a few days. We hope to be able to reach all veterans in the state who definitely plan to farm and can profit by the training.

In light of a sound philosophy of vocational education we try to place this program on a sound basis with certain entrance requirements. First of all, we require the veteran trainee to have full managerial responsibility of a farm. This is accomplished by a farm agreement entered into by the trainee, teacher, and landlord. A veteran not having managerial responsibility would be unable to put those practices into operation which he intelligently thought thru and concluded to be best. If managerial responsibility is secured, the veteran farmer has freedom of action and may execute practices as he sees best. The farm setup plus training represents full-time employment.

To insure a veteran's having a farming operation large enough, together with his training program, to be classed as full

real training program. It is further pointed out that the trainee has certain responsibilities in making this a real training program. Some of these are: (1) interest in farming backed up by a farm agreement as a good basis of training, (2) veteran should be at each class period and on time, (3) veteran should have an open mind to learn on a problem-solving basis, and (4) put into practice on individual farm those things decided to be sound and good in class.

The veteran receives a minimum of 200 hours organized class instruction and 96 hours individual supervision on the farm by the teacher per year. The farm serving as a laboratory, the veteran receives an additional 40 to 50 hours per week of training. The instructional program is based on the making and putting into operation of the farm plan. We think of the farm plan as a vital part of our farm training. The veteran trainees are extremely interested in setting up farm plans including farming type, crops, and livestock for home use and sale, soil-

lubrication, and farm accounting. At these meetings problems confronting the teachers are discussed.

We believe it takes the cooperation of trainees, teachers, and all concerned to put this program over. All the agricultural agencies have contributed toward the success of the training. As a goal, we hope to be able to train a group of intelligent and well-established farmers who will make for solidity of citizenry in Georgia as well as throughout the nation.

The first forestry industry-sponsored camp in east Texas was held during the past summer. Field work was given in tree identification, timber measuring, thinning, marketing and harvesting, woodland grazing, tree planting, and fire protection. The camp was held under the direction of the Texas Forest Service, with the Texas Extension Service and the State Board for Vocational Education cooperating.

Meat Processing in the Earle, Arkansas School

BENNY HODGES, Teacher, Earle, Arkansas

THE shortage of food brought on by the war has afforded an opportunity to educate farmers of this delta community in the value of a live-at-home program. In this section cotton has always been king with little thought given to producing food or feed crops.

The processing of fruits, vegetables, and meats by the school began with the donation of canning equipment under the program of Food Production War Training. A one-unit steam system was set up for canning which proved to be too small; so another unit was added. The canning program was successful to the extent that farmers urged a complete meat-processing unit be added in 1945 which would include slaughtering and curing, as well as canning of meats. At present, contracts are being let to install 300 frozen-food lockers which will make our plant even more complete.

which it is exhausted to 180 degrees, sealed, and processed at 10 pounds of pressure for 60 minutes. This is a lower pressure and less time than recommended, but the low pressure makes for a more palatable product and no spoilage has resulted so far. However, prechilling of carcass at 36 degrees is very important as well as keeping carcasses clean in order to process at these temperatures. Pork to be cured is cut into hams, shoulders, and bacons, and the hams and shoulders stitch pumped with 1½ ounces of 85 degree pickle per pound of meat, using an electric meat pump. This is an important operation and one in which sanitation is most important. A dirty pump or contaminated pickle can cause a whole batch of meat to spoil while in the smokehouse. However, if used properly, practically no spoilage will occur. Since using the pumping method, we have

lost only one joint in the last 12 months.

All pieces of meat are weighed separately and weights recorded on a card which has the farmers name and a number which is assigned to him. This number is also branded on each piece of his meat with an electric branding iron, in order to identify it as it is being wrapped.

One-half ounce of salt per pound of meat is weighed out and rubbed on joints when placed in the curing room. After four days, ¼ ounce per pound is weighed out and the joints rubbed again. Bacons receive one application of ¼ ounce per pound. The weighing of salt according to exact weight of meat is most important if uniformity is to be maintained. There is no danger of oversalting or of getting too little salt if this method is used, and this is most important from the standpoint of quality in cured meat. We use a good, commercial sugar cure since we have been unable to obtain sugar.

Curing Bacon

Bacons are cured one day per pound and joints 1½ days per pound at 36-37 degrees. This time of curing is shorter than recommended but has proved very successful in our plant.

After meat has cured the proper length of time, it is brought out and washed and soaked in cold, running water; bacons 1½ hours, and hams and shoulders three hours. This removes surplus salt and makes meat take a clear brown smoke without salt burns. After removing from the soaking vat, joints and bacons are fastened on hooks and hung in the smokehouse, which is steam-heated to maintain a temperature of 120 degrees. Smoke is circulated by an electric fan so that meat will smoke uniformly. The meat is smoked with hickory wood about 48 hours at which time it is usually a medium straw color. The meat is then allowed to cool after which it is wrapped in parchment and joints placed in paper bags, while bacons are wrapped again in brown paper.

Lard and sausage are also made in the plant. Lard is cut off skins, ground, and placed in large steam kettles to be rendered. It is cooked at 40-pound steam pressure until cracklings become brown and sink to the bottom of the kettle. The



Cutting and processing meats in the school cannery at Earle, Arkansas

The plant now consists of a two-unit steam cannery, a curing room that will cure 40,000 pounds of pork per month, a chill room that will cool 4,500 pounds of meat per day, a steam-heated smokehouse, and a slaughter room which has a capacity of 35 hogs per day. The slaughter room is equipped with track scales, hoists, overhead tracks, and a steam-heated scalding vat. The slaughtering and curing facilities are being financed by fees charged for use of the equipment.

Processing Procedure

All hogs and beef are scheduled at least a week ahead with hogs being slaughtered two days each week and beef two days. Beeves are stunned, stuck, and then hoisted by hind leg for a good bleed, while hogs are stuck and then hoisted. This insures a good bleed and is one of the most important operations, especially in curing hogs. Beef is usually chilled down to 38 degrees, and pork to 34 degrees before cutting. Beef to be canned is boned out and cut into steaks, roasts, and stew meats, and packed raw into cans after



A view of the wrapping and storage room of the Earle food-processing plant

lard is then strained, poured into No. 10 cans and sealed while still warm. This keeps out light and air and prevents rancidity. This is a popular size container since most of the lard will be used from can before it ages. Sausage is ground and seasoned to suit each customer's taste.

Meat curing has been our most popular service with farmers, since the temperatures this far south are not uniformly low enough to cure meat successfully. Also, most farmers would rather cure their meat one hog at a time, rather than cure the year's supply during the winter. Another popular feature of our plant is the one-stop service rendered. A farmer can bring his hog or beef to our plant, have it slaughtered, processed, lard and sausage made, and carry it all home ready to eat.

In the preceding paragraphs meat processing has been described in detail, while nothing has been said of the educational features.

A canning center at the school was a very novel thing at the beginning of this program. Much groundwork was done by the home economics and teachers of agriculture thru evening schools and thru classes in Food Production War Training among whites and Negroes to encourage production of food. Meetings were held in rural schools, churches, and in the local high school. Each spring, meetings are held in preparation for summer canning, and each year finds more and more farmers, both white and Negro coming to our plant to do their canning.

Instruction by Supervisor

During the canning season an expert supervisor instructs in the use of proper methods so as to maintain a high quality of products. Meat cutting is demonstrated, as well as the proper use of knives and tools. Sanitation is employed thru the use of chlorine solution and live steam. The plant furnishes a laboratory for the study of diseases and parasites of livestock, the losses due to improper handling, and of type, condition, and dressing percentages. All-day students are given a course in meats, as well as instruction in other jobs on livestock production in which animals themselves are used. Veterans classes help kill hogs and beef for each other, while studying butchering and the processing of meats. Two veterans are being given on-the-job training to become all-round butchers.

In meat processing we use commercial methods insofar as we have the equipment to do so. It has been a means of obtaining a market for farmers selling their livestock. Meat markets bought their meats readily when they saw our stamp on the carcass, since our methods of sanitation and butchering have been rated excellent by the State Department of Health.

The plant keeps several people employed all the time to help farmers with their processing and to process for those who do not have time to do their own. That farmers are becoming interested in food production and conservation is shown by the fact that more of them are using the plant facilities each year. The quality of vegetables, fruits, and animals to be processed is improving. They save the best hogs and beees to kill for home use instead of marketing them, and make special provisions to grow the best for their own use.

How Can We Keep Veterans Interested?

VERNON V. LUTHER, Teacher,
Neponset, Illinois

VETERANS are answering the call to education with a zest similar to their answer to the call to arms. But are they students? I believe that many teachers assume that they are, and thus plan a systematic and inclusive two- or four-year course in agriculture for the On-the-Farm Training Program. Such a course may be very educational and supply a lot of information on agriculture. It may also be presented satisfactorily by the use of problem discussion, questioning, movies, lecturing, and the like. The best teacher, with a well-planned course, may not succeed in captivating the interest of the veterans even with these proved methods of adult teaching. Why? Probably because the veteran's need has not been satisfied. The average veteran is a person whose prime interest is getting established in life, and whose basic need is money. To satisfy this need he has a more important need which is information on how to do his job efficiently or, in other words, "Vocational Training."

Need I say more then, that it is essential to include vocational training in



Vernon V. Luther

We have felt that the strongest point we have to keep up progress in food preservation is to improve quality, and this has been our goal. When the farmer realizes that he can produce better things at home than he can buy, and produce them cheaper, he will become more self-sufficient.

During the last few years very few of the farmers in this territory experienced any shortage of meat. In addition to serving this community we have served farmers from all over eastern Arkansas, many coming as far as 100 miles to get meat cured. From January 1, to November 1, 1946, we have slaughtered more than 450,000 pounds of meat, curing 140,000 pounds of pork, and canning 40,000 pounds of beef. Our total canning for the year 1946 exceeded 100,000 quarts of fruits, vegetables, and meats. The number of farmers who use plant facilities has jumped from 100 in 1944 to over 1,700 in 1946. With the addition of the frozen-food lockers, the amount of food preserved will be greatly increased, as well as improved in quality.

The school does not intend to compete with private enterprise. The small community in which we are located does not offer profit inducement enough to business for it to render these much-needed services. We try to cooperate with those who operate food plants or contemplate such an enterprise. Many locker and curing-plant managers come to our school to study our methods and we give them the full benefit of our experience, for which they are grateful.

our course planning for veterans? Of what should our On-the-Farm training consist? How to plant corn? How to de-horn cattle? How to harvest hay? Some one might answer, "That is the farmer-trainer's job." And I believe it is, except when the farmer-trainer cannot show the veteran how. Then it is the teacher's job to determine what the farmer-trainer's do not train the veterans to do on the farm. The instructor can obtain this information during the two-hour monthly visit. When he finds that a certain skill is lacking and needed, then he can plan his teaching course so as to include it.

Our problem is how to give vocational training so that the veterans remain interested, with the final result that they learn something that will help them become better farm operators.

The armed services trained these men for new vocations in a short time and did a good job of it. Can we do the same? Must we do the same? Many of these boys are already doing the job so they need the help now.

Interest Techniques

I will list the techniques that have been used with the Neponset Veteran's course in vocational agriculture and have resulted in a great deal of interest and learning.

A. Field trips: Much can be gained by visiting three or four farms which are up to date in some phase of farming such as raising livestock, soil conservation, and building repair. This affords an opportunity for the veterans to see practices that are successful, and at the same time the owner of the farm can tell how and why he is carrying on such practices.

B. Demonstrations: These can be presented at school, in the shop, or on the farm. Skills such as castration, culling, and machine repair, can be taught. Again the veteran has a chance to see how the job is done, and also has a chance to actually do it.

C. Veteran participation: Besides the class discussion, veterans like to tell what they are doing or how to do something. They may be assigned a topic, or called upon to report on something they are doing, a meeting they attended or place they have been.

D. Combined farm visits: I have often called up a veteran and said, "I am going to mark some hogs over at John's, would you like to go along?" Many skills can be taught this way such as farm selection, castration, sampling corn, selecting livestock, building repair, etc.

E. Farmer-trainer night: The farmer-trainers or the agricultural council have been called in for a class discussion. A panel discussion problem works well for this. These experienced farmers bring out a lot of information that is needed by the veterans.

F. Trained technicians: A skilled person such as a veterinarian, conservationist, or banker, can often put on a demonstration or do a better and more interesting job of vocational training in the respective skills, than the teacher.

G. Films: These are probably the least effective for vocational training unless they are the slide type which can be shown while the job is being done. In general, movies are too entertaining, even tho they do teach by sight. An occasional moving picture does add to the interest of the class.

Veterans Farm Training at Fallon, Nevada

L. C. SCHANK, Teacher

TWENTY-ONE veterans are enrolled for the institutional on-farm training program at the Churchill County High School, Fallon, Nevada. This program provides 200 hours of classroom instruction or off-farm instruction per year, and 100 hours of individual instruction on the farm per year to those veterans operating their own farms. Veterans working on approved farms are receiving 200 hours of off-farm instruction and 50 hours of individual instruction per year.

Of the 21 veterans enrolled, 10 are farm owners, 6 are working in partnership, 2 are farm renters, and 3 are farm laborers with an objective of becoming established in farming.

This training program was started on August 6 under the supervision and direction of L. C. Schank, instructor of vocational agriculture, and Charlie Miller. Classes are being conducted two nights a week for two hours each night. The subjects taught are based on the individual needs of the veterans. Farm surveys were completed on each veteran's farm. Cropping and livestock enterprises listed under the farm survey were the basis for making out an individual training outline for each veteran enrolled. During the class discussions which are conducted by conference procedure standard or approved practices are decided upon, so that every individual will understand how best to carry out each job encountered in his farming program.

What Veterans Are Doing

Three of these young men are working into the dairy business with the objective of producing Grade A milk for the Reno market; one veteran has already achieved this objective and, in addition, has purchased several more good cows; and the other two are in the process of building Grade A dairy barns.

Three veterans are going into the beef-cattle business, two have poultry enterprises, and the remainder are preparing for general farming which includes dairying, swine production, poultry, beef, and the crops necessary to feed these animals.

Farm shopwork will come in for its major share of instruction. Many of the veterans have already built up good home farm shops with electric welding machines a part of the shop equipment; group meetings will be conducted for three to five veterans where machinery can be pooled and worked on to good advantage. Additional individual instruction will be given in the school farm shop during the winter months.

Speakers Provided

Several classes have been made more interesting and educational by using specialists from the University of Nevada at Reno and the experimental station in Fallon, in addition to successful farmers in the local community. Professor V. E. Scott of the University of Nevada spent one full evening discussing the Nevada farm record book which is being used by all the veterans.

Forrest Willhite, superintendent of the Fallon Experiment Farm, discussed the results of alfalfa experiments and pointed out advantages and disadvantages during



Veterans at Fallon studying alfalfa varieties and result of green manuring. Forrest Willhite, Experimental Station Superintendent, explaining results of tests

one meeting. Charlie Frey, one of the successful beef producers in the local community, was used to good advantage by having him discuss methods which had worked out to best advantage on his farm.

Dr. Grant T. Woodward, local veterinarian, spent one meeting discussing the major animal diseases found in the local community. Royal Young, a local butcher, directed the group discussion on meats and grading. Thomas Plum, the local dairy cow inseminator, brought in his equipment and answered questions pertaining to artificial breeding.

Work Not Confined to Classroom

Seeing is believing; so the class has been taken on three field trips where they had a chance to observe outstanding farming practices which could be applied to their own farming programs.

One-half day was spent in visiting the experimental farm where Mr. Willhite showed the veterans about 20 varieties of alfalfa growing in the field. Corn tests and permanent pastures were discussed.

Other field trips have been made to study Grade A dairy barns and beef-cattle ranches. These field trips provide the group with many ideas that are usable on their own farms and prevent many costly mistakes.

Plan Cooperative Buying

In order to get the most out of their instructional program, this group has organized, elected officers, set up a program of work, established dues of 50 cents per month in order to carry out the social activities, and at present is considering buying a carload of concentrates in order to save money and raise better beef cattle.

According to L. C. Schank, director of the veterans farm training program, and Charlie Miller, instructor, this group of young farmers are very much interested in agriculture. They want to learn better methods of farming and are rapidly putting into practice on their farms what they learn in these meetings, field trips, and home farm instruction.

During the past year 94 chapters and 1,279 F.F.A. members in Georgia participated in a state-wide pasture-improvement contest.

Seymour, Wisconsin Has Active Young Farmers Association

CHARLES JENKINS, Class Member



Charles Jenkins

MANY people in this day and age are expressing concern over the fact that such a large number of farm boys leave the farm for more attractive urban employment. Yet many of these same people fail to realize the importance of agricultural education in keeping farm youth "down on the farm."

Agricultural education is a strong influence in creating a deeper interest and love for farming. Great strides have been made in this respect in the past few years. The 4-H and Future Farmer organizations have done a magnificent job in training school-age farm children. However, there is a great need for furthering this education after school days are over.

Because they felt this need, 15 young farmers met with W. T. Reese, the instructor of vocational agriculture in Seymour, Wisconsin, three years ago and organized the Young Men's Agricultural Association of Seymour. A constitution was drawn up which included 10 aims and purposes. Typical of these are:

1. To create a greater love for country life
2. To improve urban and rural relations
3. To strengthen the faith of young men in the future of agriculture
4. To practice farming on a practical basis

A new slate of officers is elected each year. They make up the executive committee which meets with Mr. Reese to plan the program of work. A course of study and social activities is mapped out for the entire year. All decisions and plans made by the executive committee must be approved by a majority vote. Today group enrollment is more than doubled.

Two Meetings Each Month

Meetings which are held twice a month are divided into three parts: study period, business meeting, and social hour.

Organized social activities play an important part in the Y.M.A.A. The annual formal harvest ball, which is the highlight of the year's social activity is looked forward to by the community.

Social life, however, is not the main goal of the Y.M.A.A. It has undertaken the study of several different subjects, such as: care and feeding of the dairy herd, orchard management, improved methods of crop production, and the use of fertilizers.

This year a home-beautification contest was launched. Prizes were awarded to members who improved the appearance of their farms to the greatest extent.

In the early months of 1945 the club began a study on how a young man should get started farming for himself. To get a better understanding of the question, the association asked representatives of the Farm Security Administration, and the Federal Land Bank to address meetings.

(Continued on page 178)

S. S. SUTHERLAND

Professional

B. C. LAWSON

Farmings' New Horizons*

R. W. GREGORY, Assistant U. S. Commissioner for Vocational Education

FARMING is land and people. Land and people in proper proportions mean food; and food perhaps is the most important single material asset a people can possess. That is by way of saying that those of you who are engaged in agricultural education that has as its primary function the serving of people who live upon and work the land are engaged in the most important and challenging educational adventure afoot today.



R. W. Gregory

Determining Usefulness of Land

It goes without saying that the most important element in this two-tone combination is man himself. For in the final analyses it is the caliber of the man that determines the usefulness of the land. In the interest of the well-being of all people then, it becomes imperative that every condition be set for fair and honest consideration to be given to the occupational opportunities in farming by men and women able and willing to deal successfully with its manifold difficulties and complexities. Farming manned by people less able eventually points the long shadow of failure and hunger across the lives of the whole people of the nation. Not only do they fail to produce, even under average circumstances, but will also lose, never more to be regained, the very basic resources for production, the land, upon which and by which they live. Upon leadership and service such as you represent here rests the destiny of nation today. How well you do your job today spells the length and level of living for countless numbers tomorrow and forever. How long the land lasts depends largely upon the practices men follow who farm it; be they practices dictated by intelligence or its lack; be they practices efficient or inefficient; be they practices of tradition or science—and to spell out how long the land lasts circumscribes the life of man upon it.

Last week I rode the train thru some of your states. We rolled across the valleys and around the hills, and each time we passed thru a cut I took particular pains to note the depth of the topsoil as it showed on the profile before me. I shudder to think how thin is the margin between plenty and poverty.

Last summer I left the orchard plantation to walk across my neighbor's fields. I climbed the fence and stood in the fence row for a contemplative moment

and then walked down onto the land below. Please notice that I said "down onto the land below." That fence row was the only part of my neighbor's land that has been blessed with a protective covering for the last 50 years, and as a consequence the original topsoil was still there. But that adjoining field had literally lost its face. I wondered how much more it could lose and still be productive at all. When the last inch of topsoil has vanished, there will be no more; and the subsoil and shale underneath will not in all likelihood produce food at all economically. If you and I as city men have to pay the real cost of producing food on that kind of land, we certainly face some hungry days; and as that land runs out a darkened future.

Last October I visited a farm of an old friend and acquaintance. We took a walk in the afternoon, as farmers are wont to do. He is elderly and I have known him a long time. Most of his farming he has to leave to others, and his spiral of production is running down. They still plant their cultivated crops up and down the slope; he was growing open-pollinated corn; no fertilizer was being used; no small grain as cover crops were being planted; only cultivated legumes were being grown; the roof to the corncrib leaked; without doubt he was feeding shotes that were full of worms, and I could go on at length.

Yes, farming is land and people working together; or working against themselves and wasting away the current and long-time resources of this nation of ours for possible improved standards of living. Our welfare rests basically upon our ability to make of one an efficient functionary that the other might be saved, so that unborn generations might still have a chance to live.

The quality of ability possessed by the men and women who farm in America during the next two generations will have more to do with the ultimate destiny of this country than any other single social or political factor. Not only will that determine the disposition of our priceless heritage, the soil, but with the same ability and understanding make determinations and exercise judgment in other barely less-important areas of life and living.

Matching Men and Farms

What I am saying to you is that I know of no more important problem than that implied in the title of a bulletin our office published a few years ago, "Matching Men and Farms." Perhaps the best criterion we could devise for evaluating our accomplishments in agricultural education would be one that has in its elements to show to what extent men and farms, people and land have been brought together in an appropriate and satisfactory manner. To what extent

would such an evaluation be fair?

Time was when there was a high correlation between a farmer's economic success at least and his independence of individual action. No longer is that so true. Generally, only as he is able and willing to cooperate and work with others will he find himself in a position of mastery over an ever-increasing number of problems that perplex and bedevil him. This is true not only in an economic and a productive sense, but also as it relates to other of his life activities. Working with his community there are developed rich resources for living that can neither be bought with economic goods nor be had by individual effort. They are priceless and unattainable except as they grow out of cooperative human relationship. Working with his community there come to be group attitudes and understandings which when made to implement policy and practice go so far in adding up for effective living as to make pale by comparison the accomplishments possible from individual effort. Life becomes richer and fuller because neighbors and friends of neighborhood and community share in all of its problems and activities.

Developing Understandings of Farming and Farm Family Living

To deal realistically with teaching in the field of cooperation and cooperative effort means to comprehend cooperation as something broader and more significant than that circumscribed by economic limitations. As a matter of fact, to rest the case for effectiveness in teaching cooperation upon economics gain accruing from it to lessen considerably its chances for success. One of the first steps we must take in our effort to resolve the difficulties faced in getting the right people onto the right land under favorable circumstances is in the direction of developing a full understanding and knowledge of the place and importance of collective judgment and action when dealing with the basic and fundamental problems of farming and farm-family living. With that as a basis of understanding and philosophy we may, with some confidence, approach our task along the following challenging routes:

1. Implement procedures and techniques, adequately and effectively to the end that a fair appraisal may be made of occupational opportunities in farming by the able and intelligent youth of this land in order that there may be recruited to it a quality of citizenry capable of dealing with its basic and critical problems of conservation production.

2. Devise instruments and procedures, making it possible for youth of the capabilities needed, having made the decision to engage in the occupation, to

- a. Find appropriate occupational opportunities in farming.
- b. Evaluate their worth in terms of outcomes of farming and farm-family living that are necessary for a full and satisfying life.
- c. And make the initial moves

*Address delivered before Agriculture Education Section, American Vocational Association, St. Louis, Missouri, December 5, 1946.

Periodicals As Teaching Implements

L. B. ROBINSON, Teacher,
Falmouth, Massachusetts

wherby entrance upon such an occupational opportunity becomes a reality.

3. Organize and conduct a program of educational service that will facilitate the development of a mastery of skill, judgment and understanding necessary for solving the technical problems of productivity on the farm and the social-civic problems of life in the community; the earmarks of which will likely include most of the following:

- (1) The service will be set up to serve all farm people who need such educational opportunities. It must reach masses if enough people are to benefit from it to make such benefits react to the final interest and welfare of people everywhere.
- (2) The service must be continuously available throughout the weeks and months and seasons of every year for the lifetime of need of every man there.
- (3) The service must be geared to the payment of immediate dividends with a guarantee of long-time investment returns, cumulatively accruing both to the individual and society. In other words, if we would teach at all, we will only begin where we find our pupils. Immediate problems and interests demand immediate educational outcomes if sufficient holding power is to be generated to lay foundations and erect superstructures of understanding, knowledge and skill of a more enduring and fundamental character.
- (4) The instructional program initially must be intensively and specifically organized and conducted so that complete understanding of direction and goal may be had by both teacher and pupils if such instruction is to be immediately productive.
- (5) The instruction should be undertaken in an intensely practical manner in its first instance. Few of us fear to deal with things we know, and with farm people practical things are old friends; "There is sense to that," they say, as the practical comes into view; we find ourselves less handicapped by starting with what makes sense.
- (6) Plan to get masterful and persuasive teaching done. A teacher who possesses the know-how, demonstrable and sure, becomes an almost absolute must in a program geared to reality, as this one must be, if desired outcomes are to be realized. He must be able himself to understand and solve the problems under consideration. Not only must that characterize him, but he must be able to impress upon the people enrolled the fact that he has the knowledge and skill necessary for the job in hand. In other words they know he has the know-how. This calls for skill upon his part in the handling of persons and in the presentation of essential instructional materials, and in the performance of the activities involved.

There apparently is nothing more important for conditioning the student for learning than the development of his

confidence in the essential integrity and ability of the person doing the teaching. If the learner believes and has confidence in the man who teaches, the man who teaches holds the key for unlocking the learning capabilities of the learner. If the farmer enrolled believes that the one who is attempting to teach not only knows how, but can actually produce results in terms of growing farm commodities, then, if such are the essential commodities being sought, definite concrete results may be expected to flow from the teaching procedures used. The first law of teaching is readiness on the part of the learner to learn. Where immediate, concrete learning ends are sought this becomes crucial to success.

- (7) Agricultural education instruction must build respect for truth, if by truth we would be free—be uneasy lest a problem be solved without the benefit of truth already expressed, at great loss and suffering for him who must know if he is to succeed. Every day adds to the answers already found, and it becomes sheer folly and waste to learn them all over again the hard and expensive way. But first there must be respect in the minds and hearts of those who would profit most. Build respect for it by proving it to be so—relate life activities to proved facts.
- (8) Discover and utilize every available resource for teaching. Otherwise we shall never have enough to do a decent job, principally because so many of those we need imperatively do not carry a price tag. They are not available unless you discover them and make them a part of what you are doing. Then they, being a part, cannot escape exerting a profound and beneficial influence upon the lives of learners in your care.
- (9) Plan for the development of current undertones that influence levels of living thru:
 - a. Health appreciation and development.
 - b. Increased standards of literacy in the art of communication and understanding.
 - c. Self-expression that leads to egoistic satisfactions if one is to build and retain respect for ones self.
 - d. Public-spirited activities that lead to developments in the common interest.
 - e. A sense of understanding of the sweetness and light in the world round about—harmony in color, sound, and form that relaxes one's body and mellows one's heart.
 - f. Periods of relaxation and rest leading to a recreation for the whole of one's personality.
 - g. Improved family relationships that grow naturally and normally out of healthy climates of social, civic, and economic atmosphere.
 - h. Father and son understanding that leads to close cooperative endeavor provocative of deep and satisfying relationships that come only thru such harmony of ideals, principles and practices.

(Continued on page 178)

OUR agricultural library includes over 50 agricultural periodicals, some general in their nature, while others are specialized but, in their entirety, covering practically every phase of agriculture. A magazine rack holds about half of these periodicals while the rest are arranged on a reading table. Each magazine or paper has its place and is to be there except when in use. In other words, neither the reading table nor the rack are places where the periodicals are thrown promiscuously. The most recent magazine or paper is at the front or the top of its respective group. It takes no longer to place them where they belong, and as a consequence of having them so placed no time is wasted in finding the periodical desired.

Now, as to their utilization. They are available at all times for reference purposes. However, we set aside regular days for their use. On these days the members of the class choose their own periodicals, use as many as they care to use and select their reading material. It is handled in this way because we feel that each individual will choose to read in that phase of agriculture in which he is most interested. This seems to work much more satisfactorily than assigning articles as we did in earlier days.

Reading Periods

The length of these reading periods varies, but they probably average close to an hour. During the reading periods, the members make notes on the important points treated in the articles which they have read. At the termination of the reading period each member of the class is called upon to stand and give an oral summary of his reading.

We introduced one innovation which seems to have merit and which serves as an aid in obtaining maximum values from the reading periods. Previous to the start of reports, each member of the class is given a small sheet of paper. As the reports are called for, each student writes on his sheet the name of the member reporting. At the close of the report, a mark is recorded by each other member of the class for the member reporting. They are asked, in recording the marks, to consider the value of the material reported, the amount of material reported, and the ease and interest displayed by the reporting student. The instructor has a similar sheet and records his marks based on the same points. This marking innovation centers the attention on the reporter and what he has to offer.

Following each report a question and discussion period is allowed to clear up any questions regarding items which have been reported.

You may be wondering what becomes of the marking papers held by the class members. They are turned in to the instructor at the end of the class periods. The total variations from the marks allowed by the instructor are determined and divided by the number marking. The average of the marks allowed for the reporting student will seldom vary as much as 5 percent from the mark allowed by the instructor.

Studies and Investigations

E. B. KNIGHT

Importance of Certain College Courses As Pre-employment Training for Prospective Teachers of Vocational Agriculture

F. E. ARMSTRONG, Teacher-Trainer, University of Hawaii

SINCE the outbreak of World War II, enrollment in agricultural teacher-training departments has been limited. Most of the young men who would have received training as teachers of vocational agriculture have been in the armed services or have been engaged in defense activities. Many teacher-trainers, however, have made good use of this period of low enrollment by studying and revising their own curricula. In this connection, the results of a study recently completed at the University of Hawaii may be of interest.

The Problem: In this study an attempt was made to discover how important teachers of vocational agriculture consider certain college courses to be as pre-employment training for prospective teachers in this field in Hawaii. The study was based on the assumption that present and former teachers are well qualified to say which courses have been or would have been of value to them in their work. It was recognized, however, that the recommendation of teachers is only one of several factors to be considered in choosing courses for the curriculum in agricultural education.

Procedure. The data presented below were obtained from present and former teachers of agriculture, all of whom were familiar with the demands made upon teachers of agriculture in Hawaii and with the work offered in the teacher-training institution. Included among the former teachers were a few men acting as principals of schools and several who were in the armed services, engaged as farmers, plantation officials, business men, and teachers of other subjects.

The teacher-trainer selected from each department of the University of Hawaii those courses that might be of interest or value to a trainee in agricultural education and arranged them in the form of a table. The title, semester hours of credit, and the department where offered were given for each course. Space was provided where the teacher could check to show: (1) Whether he had completed the course, or a course of comparable content, at this or some other teacher-training institution; and (2) Whether he considered the course to be "very important," "important," "of little importance," or "of no importance" as pre-employment training for prospective teachers of vocational agriculture in Hawaii. Included in the table was at



F. E. Armstrong

least one course from each department of the University offering instruction to undergraduates. All of the courses offered in agriculture and in agricultural education were included.

A second table, arranged for checking as was the first, contained titles and proposed semester hours of credit for certain courses carried by trainees in other teacher-training institutions but not offered at the University of Hawaii. Only such courses as would be of interest to trainees in Hawaii were included. A total of 198 courses from 36 departments were listed in the two tables. Space was provided in a third table where the person supplying the information could name and evaluate other courses he considered desirable for trainees.

Persons supplying the information were told that their ratings as to the importance of the courses as pre-employment training for prospective teachers of vocational agriculture would be interpreted as follows: A rating of "very important" indicates that the teacher makes frequent use of the things taught in the course and he thinks it should be required of every student majoring in vocational agricultural education at the teacher-training institution. A rating of "important" means that the teacher makes use of the things taught in the course and thinks it should be elected by most trainees. A rating "of little importance" means that the things taught in the course are used by the teacher of vocational agriculture on rare occasions and that the course should be elected by very few trainees. A rating "of no importance" indicates that the course has little or no value for prospective teachers of vocational agriculture and that no trainee should take it.

Trainees normally graduate from the four-year curriculum at the University of Hawaii after completing approximately 140 semester hours and from the five-year curriculum after completing 170 semester hours. Since each man should be permitted to elect a number of courses, it is not possible to require courses carrying more than 100 to 115 semester hours for the bachelor of science degree, nor courses carrying more than 30 additional hours for the five-year diploma. Those persons who supplied information were instructed to take the above facts into consideration when estimating the importance of the courses for prospective teachers of vocational agriculture.

The lists of courses and the table upon which the teachers could add other courses were submitted to 82 persons for their opinions. In a few cases the data were obtained thru personal interviews, but in most cases the forms were sent by mail. Replies were received from 59

persons, 72 percent of the total.

Treatment of the Data. After the forms had been checked and returned, courses were grouped by departments and tables prepared, showing: (1) The number of persons who had completed and those who had not completed each course and (2) The number of persons who recommended each course as being "very important," "important," "of little importance," or "of no importance" as pre-employment training for prospective teachers of vocational agriculture in Hawaii.

All teachers who supplied data did not evaluate each course submitted to them. In order to compare courses that had been evaluated by varying numbers it was necessary to assign numerical weightings to the steps in the rating scale. A weighted rating for each course was obtained by assigning 15 points for each rating of "very important," 10 points for each rating of "important," 5 points for each "of little importance," and 0 for each "of no importance," obtaining the sum of all ratings, and dividing this sum by the number of teachers rating that course. A weighted rating of 15.0 for a course would indicate that every teacher who evaluated it considered it to be "very important" as pre-employment training for prospective teachers of vocational agriculture in Hawaii. A weighted rating of 0.0 would indicate that every teacher who evaluated that course considered it to be "of no importance" as pre-employment training. Weighted ratings actually ranged all the way from 0.7 to 14.7.

Significant Findings. The judgment of teacher-trainers, supervisors, and administrators as to the proper distribution of semester hours among the various subject matter fields making up the agricultural teacher-training curriculum has varied but little. They usually recommend that about 45-50 percent of the total time be given to courses in technical agriculture, 25 percent to relate sciences, 15 percent to professional education and psychology, and the remaining 10-15 percent to other courses including electives. The recommendations of teachers and former teachers are not in agreement with this distribution.

By selecting a point on the weighted rating scale and considering only those courses with weighted ratings equal to, or higher than this point, we may group recommended courses carrying any desired number of semester hours of credit. There were, for example, 51 courses, carrying 175 semester hours of credit, with weighted ratings of 10.0 or better, and 36 courses, carrying 127 semester hours, with weighted ratings of 11.25 or better. Table I groups together by subject-matter fields courses with weighted ratings of 10.0 or better, courses with weighted ratings of 11.25 or better, and courses with weighted ratings of 12.0 or better. Shown for each group are the total number of semester hours recommended in each field and the percent this is of the total for the group as a whole.

Table I

Distribution Among Certain Fields of Study of the Semester Hours Recommended for the Agricultural Teacher-Training Curriculum

Field of study	W.R.* 10.0 or higher		W.R.* 11.25 or higher		W.R.* 12.0 or higher	
	Sem. Hrs.	% of total	Sem. Hrs.	% of total	Sem. Hrs.	% of total
Technical agriculture.....	61	34.9	50	39.4	39	37.9
Vocational education.....	42	24.0	42	33.1	40	38.8
General education and psychology.....	10	5.7	—	—	—	—
Biological sciences.....	25	14.3	13	10.2	10	9.7
Physical sciences.....	21	12.0	8	6.3	8	7.8
Economic sciences.....	3	1.7	3	2.4	—	—
English.....	13	7.4	11	8.7	6	5.8
Totals	175	100.0	127	100.1	103	100.0

*W.R. = weighted rating.

Table II

Importance of Certain College Courses in Agricultural Education As Pre-Employment Training for Teachers of Agriculture

Course	Number of Teachers Evaluating	Weighted Ratings*
Practice Teaching.....	52	14.7
Methods of Teaching Vocational Agriculture.....	53	14.6
Interne Teaching in Vocational Agriculture.....	48	14.6
Directing Supervised Farming Programs.....	52	14.5
Principles of Vocational Education.....	55	14.2
Teaching Agricultural Related Subjects.....	52	13.2
Teaching Young- and Adult-Farmer Classes.....	51	13.1
Visual Education for Teachers of Agriculture.....	51	13.1
Teaching Pre-Vocational Agriculture.....	51	12.8
Seminar for Interne Teachers.....	43	12.3
Seminar in Vocational Education.....	41	11.6

*Range of weighted ratings from 0.0 to 15.0.
0.0 to 3.74 = "No importance"; 3.75 to 7.49 = "Little importance";
7.50 to 11.24 = "Important"; 11.25 to 15.0 = "Very important."

In the past, graduates of the five-year curriculum at the University of Hawaii have completed about 170 semester hours of course work. Graduates of the four-year curriculum are now required to complete 130 hours, of which about 25 will be electives. The three groupings in Table I represent fairly closely, therefore, the time distribution recommended for the five-year diploma, the bachelor of science degree, and the bachelor of science degree when electives are not included. One of the groupings will probably approximate the semester-hour requirement in other teacher-training institutions.

It is of interest to compare the number of hours of technical agriculture recommended as pre-employment training for teachers of vocational agriculture with the number of semester hours of vocational education as shown in Table I. When it is expected that the student will complete a total of 175 semester hours of training before being employed as a teacher, 61 semester hours in technical agriculture are recommended. When only 103 semester hours are available for training, however, only 39 semester hours are allotted to technical agriculture. On the other hand, the number of semester hours of vocational education is approximately the same regardless of the total number of credits the student is expected to earn.

It will be noted, too, that the total semester hours recommended in vocational education, 40-42, is considerably greater

than is now required in most teacher-training institutions. It would seem that courses in vocational education have great value in themselves—that they do not serve merely to supplement the courses in technical agriculture and the sciences.

The technical agriculture recommended for the teacher-training curriculum is widely distributed. The 50 semester hours suggested in the third column in Table I is divided as follows: Field crops and soils, 11; animal husbandry, 9; horticulture and gardening, 8; farm mechanics, 7; dairy husbandry, 6; poultry husbandry, 6; and farm management, 3.

The highest rating given any course in technical agriculture was a weighted rating of 14.6 assigned to a course in poultry husbandry. The highest weighted rating assigned any course in field crops and soils was 12.7; the highest to a course in animal husbandry, 13.6; to a course in horticulture and gardening, 14.4; to a course in farm mechanics, 14.3; to a course in dairy husbandry, 11.9; and to the farm management course, 13.3.

Table II gives the titles of all courses in agricultural education submitted to the teachers, the number of persons evaluating, and the weighted rating assigned each course. Several other titles were suggested as desirable additions to the list but because no course was proposed by more than two persons they have not been included in Table II.

It will be noted that the teachers were in almost complete agreement as to the importance of the courses in Table II, each carrying a weighted rating high enough to make it a required course in the agricultural education curriculum. The courses that seem to appeal most strongly to the teachers, however, are those most closely related to their work, such as practice teaching, interne teaching, and the special-methods courses.

Some agricultural education courses proposed as desirable additions are methods in agricultural extension work, activities of the F.F.A. organization, advanced methods in supervised practice, parliamentary procedure, classroom organization, and community surveys. Part of the teaching content of some of these is to be found in the courses listed in Table II. A few of those suggested represent areas never covered before in agricultural education courses at the University of Hawaii.

The only courses in the sciences with ratings of 11.25 or higher were general botany, general entomology, agricultural entomology, agricultural economics and general chemistry. No course in the social sciences were rated higher than 6.3. Three courses in English had ratings better than 11.25: English composition, fundamentals of effective speech, and public speaking.

Courses with the lowest weighted ratings were in departments not closely connected with the teaching of vocational agriculture: foreign languages, dental hygiene, music, art, and religion.

Because the detailed findings of this study apply only to the Territory of Hawaii, they have not been given in this report. They have, however, been most interesting to us. It is thought that the technique will be of general interest to other teacher-training departments.

Tri-State Marketing

(Continued from page 166)

During their stay the students are quartered in the Shippers Club at the Union Stockyards. Here they meet with other patrons, livestock shippers, and truckers. These accommodations are available to the students and instructors who remain over for tours of the packing plants on the day following the school.

The various agencies cooperating in sponsoring the Livestock - Marketing School include all livestock-marketing interests at the Union Stockyards. The state departments of education and the universities of the three cooperating states contribute towards the planning and conducting of the program. Assisting in the program are others prominent in agricultural education in the respective states which participate in the school.

The intrinsic value in such Livestock-Marketing Schools reaches beyond merely the practical side of the lessons learned. More important to the student is the planning, experience, and carrying out to a conclusion by him of a definite project, thereby extending his viewpoint and bringing a wider horizon to the student.

The Brady, Texas, F.F.A. Chapter earned about \$150 taking blood samples and grading breeding turkeys last year.

Use of Dynamite in Constructing Drainage Ditches

CARL G. FLOTEN, Teacher, The Dalles, Oregon

THE warning call of the "powder monkey" would seem to have little place around a group of high-school students; however, it became a common occurrence to Future Farmers of America of the Halfway High School in Baker County, Oregon. (Note: Mr. Floten formerly taught at the Halfway School) This school is located in a high, irrigated valley in the Blue Mountains of eastern Oregon. As with many older, irrigated areas little thought was given to drainage with the result that many of the finest soils are in need of some drainage. Deep, fertile soil, high in organic material and heavily saturated with water would not support heavy ditching machinery without severe damage to fields or completely miring machinery. Further complicating the problem was the shortage of labor and high costs of hand ditching. These factors encouraged the use of ditching dynamite to construct drainage ditches.

Department Has Detonator

Ditching of this type was first demonstrated in this valley by Cliff Conrad, county agent and Art King, soils specialist of the Oregon extension service with the cooperation of the Halfway F.F.A. chapter and Carl G. Floten, adviser. At this initial demonstration 105 farm folks attended and were very favorably impressed with the possibilities of this method. As a result of the demonstration an electric detonator and 250 feet of insulated detonating wire was purchased for the use of the department of vocational agriculture at the Halfway High School. The equipment was promptly put to use in the community under the supervision of the agricultural teacher. Many farm operators used the equipment on loan from the school after first attending other demonstrations put on by the F.F.A. chapter.

The total amount of this work done in the valley is rather hard to estimate since the detonator would often serve several farms before being returned to the school. The agricultural classes participated as a group on many farms doing all the work of laying out drain ditches, setting the powder and actual shooting. An estimated 250 acres have been directly reclaimed or aided by this drainage method and probably as much more indirectly improved by lowered water table and increased aeration. A rather close check on cost of this type of ditching showed about \$1 per rod for a ditch $3\frac{1}{2}$ feet deep by about $5\frac{1}{2}$ feet wide at the top. This varied with soil type to some extent but the cost was fairly constant in soil that was wet enough to carry the charge by propagation. One box of 50 percent ditching powder would make a ditch about 150 feet long.

Precautions

Dynamite has a definite place as a farm tool for drainage and land clearing, and as such has a place in the teaching of vocational agriculture. Some instructors would probably question the advisability of using powder around students, but my experience would indicate the instruc-



Carl Floten, instructor of vocational agriculture, examines a newly blasted ditch near Halfway, Oregon

tion in proper use of powder is considerably easier to teach than proper safety methods with power machinery in the shop or on the school farm, which can be equally dangerous. Also most of the large powder companies maintain specially trained men who are available to assist instructors of agriculture in starting such a program.

Seymour, Wisconsin Has Active Young Farmers Association

(Continued from page 173)

One of the group has this to say, "There are innumerable ways that I have benefited thru my work in the Y.M.A.A. I have learned the value of feeding balanced rations, of using proper fertilizers, and of keeping accurate farm accounts. I have gained poise and confidence, and what is perhaps more important, a sense of pride and well-being in my profession.

"As a group we have made a name for ourselves in the community in which we live, and the people of Seymour have become more farm conscious. We are happy in our work and proud to be living down on the farm."

Farmings' New Horizons

(Continued from page 175)

- (10) Relate the aims of education for farming to the broader and more fundamental aims of education for farm-family living, taking into consideration the fact that farming is not only an economic occupation, but equally as important in a mode of living involving the whole of the farm family. The welfare of one is tied in the welfare of the whole.

Harry F. Ainsworth

Mr. Harry F. Ainsworth, state supervisor of agricultural education, in Indiana, died of a heart attack at his hotel in Indianapolis the evening of November 21, 1946. His death came as a great shock to his family and many friends since he had suffered no previous illness and seemed in excellent health and spirits the day of his death.

Mr. Ainsworth was born in Decatur County, Indiana, 54 years ago. He was a graduate of Culver Military Academy and of the University of Illinois. He had taught vocational agriculture in Indiana and served on the state 4-H Club staff. Since 1941, Mr. Ainsworth had served both as state 4-H Club leader and state supervisor of agricultural education.

Mr. Ainsworth is survived by his widow, Mrs. Helen Ainsworth, two daughters, Mrs. Lynn S. Robertson, Jr. of East Lansing, Michigan, and Miss Jean Ainsworth, head resident of South Hall at the Purdue Women's Residence Halls; and two sons, Charles B. and William H. Ainsworth, both Navy veterans and both students at Purdue.

E. V. Bearer

Professor E. V. Bearer, who for the past 26 years had been assistant state supervisor and assistant teacher-trainer in New Jersey, was instantly killed in an automobile accident on October 21, 1946. He was en route to visit the agricultural department at Allentown, New Jersey, when the accident occurred.

Professor Bearer is survived by his widow and three daughters, who will continue to reside in New Brunswick.

Dr. Harold F. Cotterman, for 29 years a worker in agricultural education in Maryland, was promoted on July 1, 1946, to the position of dean of faculty at the University of Maryland. At the time of his promotion, Doctor Cotterman held the positions of professor and head of agricultural education, state supervisor of agriculture, and assistant dean of the college of agriculture.

The Lampassas, Texas, Future Farmers are raising funds for their local chapter by operating a school store where school supplies, work books, candy, and cold drinks are sold. The funds derived from the store are used for various improvements and equipment. During the past three years a stone building has been erected and the Future Farmers have installed equipment in the shop and classroom. They now own livestock which includes one registered Duroc boar, two registered rams, one registered Brahma bull, and 166 pedigree turkeys.

During the past 15 years students of vocational agriculture at Loudonville, Ohio, have planted 60,000 pine and locust trees on their home farms. Some of the earlier plantings of locusts are ready for fence posts and many of the pines are 15 to 20 feet tall. Last spring members of the F.F.A. chapter planted 15,500 trees for farmers at a rate of \$8 per thousand.

The Texas Tech Collegiate chapter of the F.F.A., which was inactive during the war has been reorganized with R. L. Chappelle serving as adviser.

